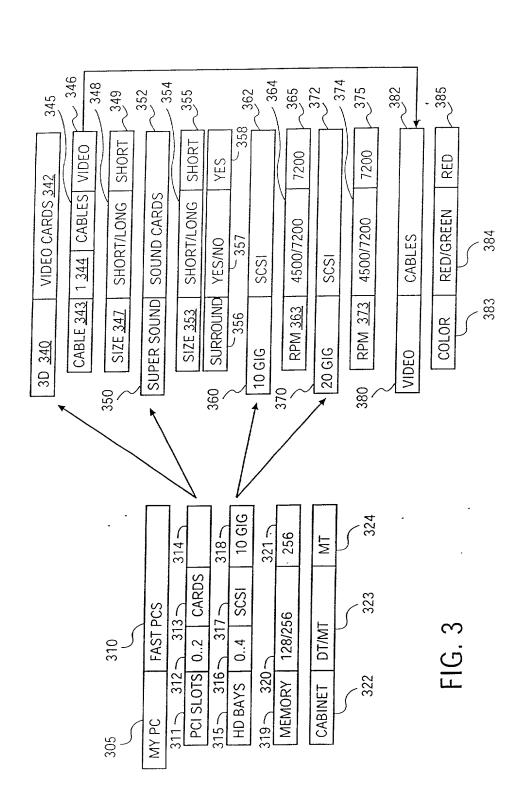


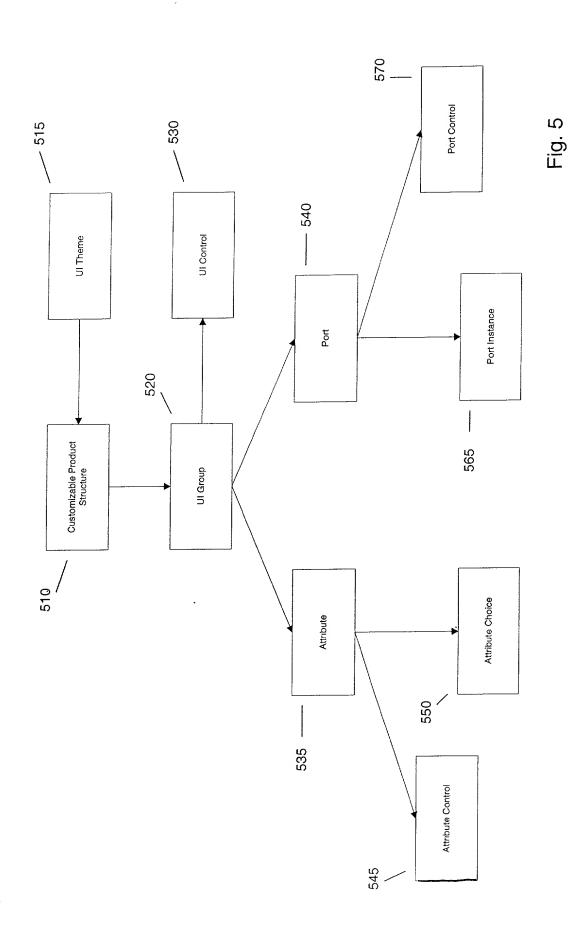
Fig. 1

Fig. 2



Minimum Cardinali		Maximum Cardinality	System Adds Default Product?	User Pick Read?	. Initial Solution	User Actions Allowed
=0	= Min Card	>Default Card	No	No	No items	Increase item quantities to Max Card
=O	> Mın Card	=Default Card	No	No	N=Max Card	Decrease Item quantities to 0 but cannot increase them.
=O	> Mın Card	>Default Card	No	No	N=Default Card	Increase item quantities to Max Card or decrease them to 0
>0	= Min Card	≃Default Card	Yes	Yes	N=Min, Default, Max	Cannot increase or decrease item quantities.
>0	= Mın Card	> Default Card	Yes	Yes	N=Mın	Can increase item quantities to Max Card but cannot decrease them.
>0	> Min · Card	= Default Card	Yes	Yes	N=Defaul(Can decrease item quantities to Min Card but cannot increase them
>0	> Min Card	>Default Card	Yes	Ycs	N=Default	Can decrease item quantities to Min Card or increase them to Max Card

Fig. 4



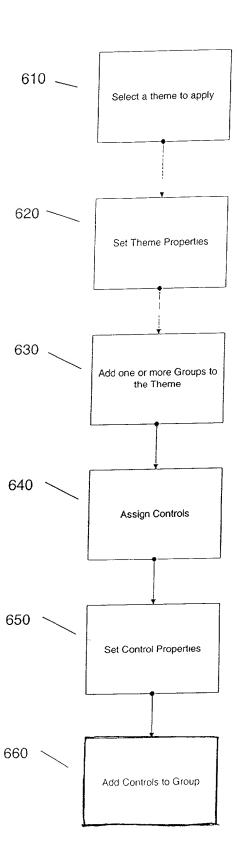


Fig. 6

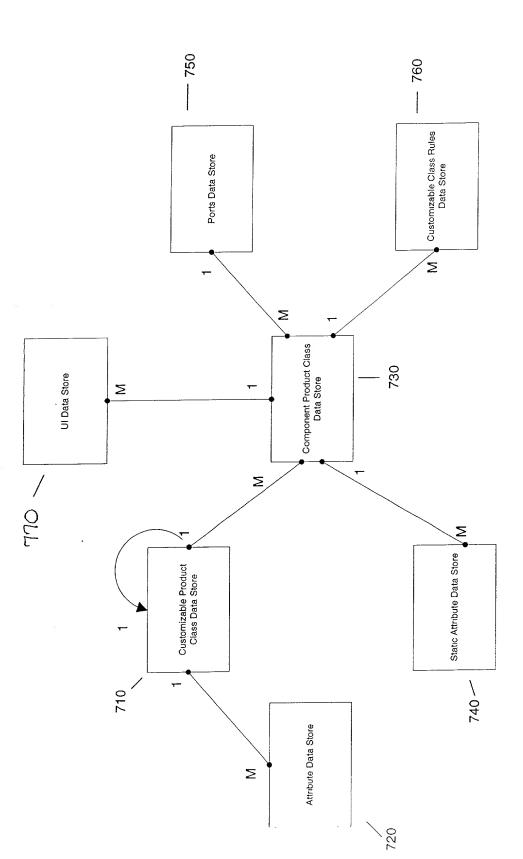


Fig. 7

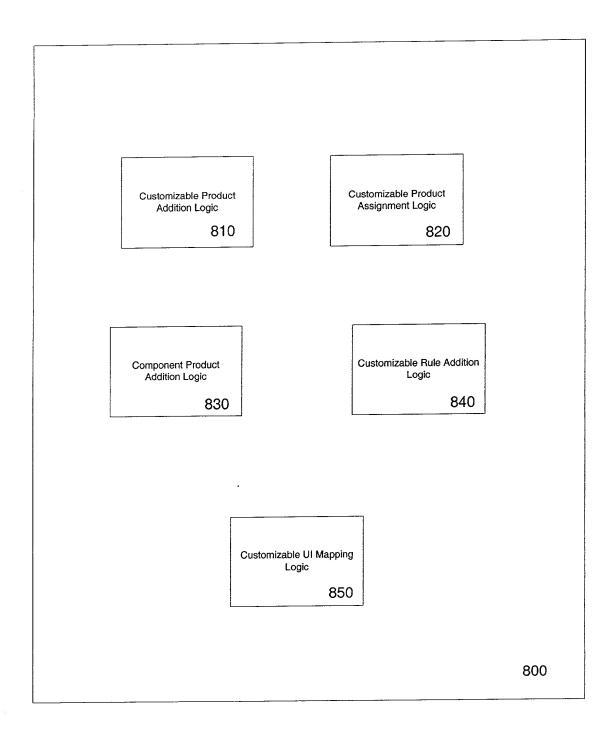


Fig. 8